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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,652	10/17/2003	Jeff M. Anderson	100202797-1	1244
22879 7590 10/23/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER HUANG, WEN WU	
			ART UNIT 2618	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/688,652	<b>Applicant(s)</b> ANDERSON ET AL.	
	<b>Examiner</b> Wen W. Huang	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

Claims 1-24 are pending.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamming et al. (US. 6,922,725 B2; hereinafter "Lamming") in view of Hitaka (US. 7,145,679 B2).

Regarding **claim 1**, Lamming teaches a method for printing information at a remote location, comprising:

establishing (see Lamming, col. 8, lines 46-50) a network connection (see Lamming, fig. 1, components 102 and 112) at a remote location (see Lamming, fig. 1, component 110); and

receiving a list of printing devices (see Lamming, col. 8, lines 48-59) communicatively coupled to the print service and available to a mobile-computing device for printing (see Lamming, col. 8, lines 60-67).

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Lamming is silent to teaching that comprising:

requesting a print device context responsive to a printer selected from the list of printing devices;

using an application resident on the mobile-computing device to render information to the print device context, wherein the application generates a plurality of device commands responsive to the information to be printed; and

forwarding the device commands to the print service, wherein the print service renders the device commands against the printer. However, the claimed limitation is well known in the art as evidenced by Hitaka.

In the same field of endeavor, Hitaka teaches that comprising:

requesting a print device context responsive (see Hitaka, fig. 6, step 609, update shop information) to a printer selected from the list of printing devices (see Hitaka, fig. 6, step 607, select shop, fig. 7; col. 11, lines 16-23);

using an application resident on the mobile-computing device to render information to the print device context (see Hitaka, fig. 1, printer driver 102), wherein the application generates a plurality of device commands responsive to the information to be printed (see Hitaka, fig. 1, print set information 107 and print data 104; fig. 10); and

forwarding the device commands to the print service, wherein the print service renders the device commands against the printer (see Hitaka, fig. 1, HTTP server 122, col. 12, lines 33-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming with the teaching

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of Hitaka in order to increase the number of clients who use the print service (see Hitaka, col. 2, lines 10-18).

Regarding **claim 2**, the combination of Lamming and Hitaka also teaches the method of claim 1, further comprising:

intercepting the device commands (see Hitaka, fig. 1, printer driver 102 and print data 104);

generating an intermediate format (see Hitaka, fig. 1, printer order application 105 and print order); and

rendering the intermediate format before the step of forwarding (see Hitaka, fig. 1, print order containing print set information 107 and print data 104 prior to transmission to HTTP server 122).

Regarding **claim 3**, the combination of Lamming and Hitaka also teaches the method of claim 1, further comprising:

receiving a common driver from the print service (see Hitaka, col. 11, lines 16-23).

Regarding **claim 4**, the combination of Lamming and Hitaka also teaches the method of claim 1, further comprising:

receiving a printer status from the print service (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 5**, the combination of Lamming and Hitaka also teaches the method of claim 4, further comprising: forwarding the printer status to the application (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 6**, Lamming teaches a computer-readable medium (see Lamming, col. 24, lines 36-37) having stored thereon an executable instruction set (see Lamming, col. 24, lines 29-30), the instruction set, when executed by a processor (see Lamming, col. 24, lines 46-47), directs the processor to perform a method comprising:

sensing a change of connection status (see Lamming, col. 21, lines 48-51 and col. 20, lines 8-9) between a mobile-computing device (see Lamming, fig. 2, component 110) and a wireless access device (see Lamming, fig. 2, component 202) coupled to a local area network (see Lamming, fig. 2, component 120);

establishing (see Lamming, col. 19, lines 5-11) a communication session (see Lamming, fig. 16, component 1601) with a print service accessible via the local area network (see Lamming, fig. 16, component 1611) when the change of connection status indicates that the mobile-computing device has established a communication session with the wireless access device (see Lamming, col. 20, lines 8-13),

wherein during the communication session the mobile-computing device uses a printer driver configured to generate a generic device context responsive to a designated printer coupled to the print service (see Lamming, col. 10, lines 56-65).

Lamming is silent to teaching that comprising:

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using the printer driver to intercept graphics device commands generated by an application operative on the mobile-computing device; and

forwarding the graphics device commands to the print service, wherein the print service renders the graphics device commands against the designated printer.

However, the claimed limitation is well known in the art as evidenced by Hitaka.

In the same field of endeavor, Hitaka teaches that comprising:

using the printer driver to intercept graphics device commands generated by an application operative on the mobile-computing device (see Hitaka, printer driver 102 and print order application 105); and

forwarding the graphics device commands to the print service, wherein the print service renders the graphics device commands against the designated printer (see Hitaka, fig. 1, HTTP server 122, col. 12, lines 33-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming with the teaching of Hitaka in order to increase the number of clients who use the print service (see Hitaka, col. 2, lines 10-18).

Regarding **claim 7**, the combination of Lamming and Hitaka also teaches the computer-readable medium of claim 6, wherein using the printer driver comprises generating an intermediate format and rendering the intermediate format before forwarding the graphics device commands (see Hitaka, fig. 1, print order containing print set information 107 and print data 104 prior to transmission to HTTP server 122).

Regarding **claim 8**, the combination of Lamming and Hitaka also teaches the computer-readable medium of claim 6, wherein during the communication session, the mobile-computing device receives a common driver from the print service (see Hitaka, col. 11, lines 16-23).

Regarding **claim 9**, the combination of Lamming and Hitaka also teaches the computer-readable medium of claim 6, further comprising: receiving a printer status from the print service (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 10**, the combination of Lamming and Hitaka also teaches the computer-readable medium of claim 6, further comprising: forwarding the printer status to the application (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 11**, the combination of Lamming and Hitaka also teaches the computer-readable medium of claim 6, further comprising: displaying information indicative of a printing device available to the mobile-computing device.

Regarding **claim 12**, the combination of Lamming and Hitaka also teaches the computer-readable medium of claim 6, further comprising: reporting information indicative of the condition of pending print tasks (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).



Regarding **claim 13**, the combination of Lamming and Hitaka also teaches the computer-readable medium of claim 6, further comprising: identifying a default device for print requests originating within the mobile-computing device (see Lamming, col. 19, lines 31-35).

Regarding **claim 14**, the combination of Lamming and Hitaka also teaches the computer-readable medium of claim 6, further comprising: reconfiguring the mobile-computing device in accordance with indicia of the default device (see Lamming, col. 19, lines 62-67 and col. 20, lines 24-26) when the change of connection status indicates that the communication session with the wireless access device has terminated (see Lamming, col. 21, lines 7-15).

Regarding **claim 15**, Lamming teaches a mobile computing device comprising:  
means for generating a change of connection status (see Lamming, col. 21, lines 48-51 and col. 20, lines 8-9) between a mobile-computing device (see Lamming, fig. 2, component 110) and a wireless access device (see Lamming, fig. 2, component 202) communicatively coupled to a print service (see Lamming, fig. 16, component 1611);  
means for establishing (see Lamming, col. 19, lines 5-11) a communication session (see Lamming, fig. 16, component 1601) with the print service when the change of connection status indicates that the mobile-computing device has established a connection with the wireless access device (see Lamming, col. 20, lines 8-13),

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wherein during the communication session the mobile-computing device uses a printer driver configured to generate a generic device context responsive to a designated printer coupled to the print service (see Lamming, col. 10, lines 56-65).

Lamming is silent to teaching that comprising:

means for intercepting graphics device commands generated by an application operative on the mobile-computing device; and

means for forwarding the graphics device commands to the print service, wherein the print service renders the graphics device commands in accordance with the printer. However, the claimed limitation is well known in the art as evidenced by Hitaka.

In the same field of endeavor, Hitaka teaches that comprising:

means for intercepting graphics device commands generated by an application operative on the mobile-computing device (see Hitaka, printer driver 102 and print order application 105); and

means for forwarding the graphics device commands to the print service, wherein the print service renders the graphics device commands in accordance with the printer (see Hitaka, fig. 1, HTTP server 122, col. 12, lines 33-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming with the teaching of Hitaka in order to increase the number of clients who use the print service (see Hitaka, col. 2, lines 10-18).

Regarding **claim 16**, the combination of Lamming and Hitaka also teaches the mobile-computing device of claim 15, wherein the means for establishing a communication session with the print service comprises an application program (see Lamming, fig. 16, component 1604; col. 18, lines 60-62).

Regarding **claim 17**, the combination of Lamming and Hitaka also teaches the mobile-computing device of claim 15, wherein the means for intercepting graphics device commands comprises a printer driver (see Hitaka, fig. 1, printer driver 102).

Regarding **claim 18**, the combination of Lamming and Hitaka also teaches the mobile-computing device of claim 15, wherein the means for establishing a communication session further comprises means for receiving a common driver (see Hitaka, col. 11, lines 16-23).

Regarding **claim 19**, the combination of Lamming and Hitaka also teaches the mobile-computing device of claim 15, further comprising: print task initialization means for receiving a user-selected input indicative of content desired to be printed by the printing device (see Lamming, fig. 6, component 602; col. 9, line 64 – col. 10, line 3).

Regarding **claim 20**, the combination of Lamming and Hitaka also teaches the mobile-computing device of claim 19, further comprising: monitoring means for

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observing the condition of pending print tasks (see Lamming, fig. 5, component 502; col. 8, lines 36-43).

Regarding **claim 21**, Lamming teaches a mobile-computing apparatus, comprising:

- a processor (see Lamming, col. 24, lines 46-48);

- a memory coupled to the processor having stored therein a driver (see Lamming, col. 10, lines 56-65 and col. 24, lines 35-37) comprising:

- a communication interface (see Lamming, fig. 10, component 212, col. 7, line 57 and col. 12, lines 65-67) including:

- an application interface for communicatively coupling the driver to an application executing within the processor (see Lamming, fig. 16, interface between 1608 and 1610; col. 23, lines 28-45); and

- a print service interface for communicatively coupling the driver to a print service wirelessly coupled to the mobile-computing apparatus (see Lamming, fig. 10, components 106 and 108; fig. 16, print request 1620 and print response 1622).

Lamming is silent to teaching that comprising:

- an interceptor coupled to the communication interface, the interceptor configured to identify and forward graphics device commands issued by the application; and

- a formatter coupled to the interceptor, wherein when the formatter is enabled, the formatter renders information desired to be printed from the mobile-communication

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device to an intermediate format communicated to the print service. However, the claimed limitation is well known in the art as evidenced by Hitaka.

In the same field of endeavor, Hitaka teaches a mobile-computing apparatus comprising

an interceptor coupled to the communication interface, the interceptor configured to identify and forward graphics device commands issued by the application (see Hitaka, printer driver 102); and

a formatter coupled to the interceptor (see Hitaka, fig. 1 print order application 105), wherein when the formatter is enabled, the formatter renders information desired to be printed from the mobile-communication device to an intermediate format communicated to the print service (see Hitaka, fig. 1, HTTP server 122, col. 12, lines 33-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming with the teaching of Hitaka in order to increase the number of clients who use the print service (see Hitaka, col. 2, lines 10-18).

Regarding **claim 22**, the combination of Lamming and Hitaka also teaches the apparatus of claim 21, wherein when the formatter is disabled, the interceptor forwards the graphics device commands to the print service for rendering via a printer driver compatible with a select printer coupled to the print service (see Hitaka, center server 120, print data 104).

Regarding **claim 23**, the combination of Lamming and Hitaka also teaches the apparatus of claim 21, further comprising: a message handler configured to receive indicia of a printer status (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 24**, the combination of Lamming and Hitaka also teaches the apparatus of claim 23, wherein the message handler is configured to forward the printer status via the application interface to the application (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshida et al (US Pub No. 2004/0061894 A1) teach a print distribution system.

Kemp et al. (US. Pub No. 2002/0078160 A1) teach printing over the Internet.

Taniguchi et al. (US. Pub No. 2002/0013869 A1) teach a data output system.

Ferlitsch (US. 6,943,905 B2) teaches a virtual print driver system.

Abe (US. 6,892,299 B2) teaches a method for allowing an appropriate printer driver to be downloaded.

Dervarics (US. 6,553,240 B1) teaches a print option for WAP browsers.

Hanson (US. 6,148,346) teaches a dynamic device driver.

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Related US application 10/390,231.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen W. Huang whose telephone number is (571) 272-7852. The examiner can normally be reached on 10am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wwh

*Wen W. Huang*  
10/17/07

  
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